

Easy number systems

Integers can be distinguished with various criterion for example, positive/negative/zero or even/odd. Your task is trying implementing a program which can distinguish the number

Input

An integer.

Output

2 lines which is the input integer information, the first line is positive/zero/negative, the second line is even/odd.

Example

Input (from keyboard)	Output (on screen)
12	positive even
-35	negative odd
0	zero even